

# SELECTED ASPECTS OF TOBACCO CONTROL IN CROATIA

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## SUMMARY

This paper seeks to outline the challenges of tobacco consumption control in the transitional economy of Croatia. It focuses on issues of taxation, high unemployment, and smuggling while attempting to meet European Union (EU) accession requirements for tobacco control legislation that reduces smoking consumption. The issue of tobacco control is not a simple one and requires a multi-pronged approach. While Croatia has made good progress in adopting legislation, it needs to strengthen its efforts both in terms of enforcement and increased taxation of cigarettes.

*Key words:* smoking, tobacco control, workplace, Croatia

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## INTRODUCTION

### Tobacco Control Legislation

Tobacco control legislation has gained prominence at the European Union level and the rest of the world due to the serious medical effects of smoking. It is well known that smoking harms nearly every organ of the body, causing many diseases, and reduces quality of life and life expectancy. The highest recorded level of smoking was among men and was first recorded in 1948 when surveys started. At that time, 82% of men were smoking (1). It has been estimated that between 1950 and 2000, 60 million people worldwide have died from tobacco-related diseases (2). It is further estimated that by 2030 the worldwide death toll due to smoking will be around ten million annually (3).

The concern about smoking has been heightened as evidence mounts about the cost of smoking and the effects of second-hand smoke. Smoking remains the biggest cause of avoidable death in Europe (4).

A “smoke-free Europe” is one of the priorities of the European Commission’s public health, environment, employment and research policy. Substantial steps have already been taken to promote a smoke-free environment in the EU. Progress has been achieved due to legislative efforts and diligent health promotion efforts. In the early nineties, a number of EU health and safety at work directives defined certain restrictions on smoking at work. These were complemented by the Recommendation on Smoking Prevention of 2002 which called on Member States to provide protection from exposure to environmental tobacco in indoor workplaces, enclosed public places, and public transport (5).

National legislation differs widely across Member States. Italy, Malta, Sweden and parts of the United Kingdom have been cited as having excellent examples of effective measures to protect their citizens from the harmful effects of smoking. Other countries are less stringent in their legislation to restrict tobacco use. There is, however a clear trend towards smoke-free environments

throughout the EU Member States driven by legal requirements and public support at the EU level. For example, many Member States have regulations banning or restricting smoking in major public places, such as health care, educational and government facilities, and public transport.

As a number of new nations emerged in the early nineties following the break up of the former Yugoslavia, there has been a spurt of regulatory initiatives as they have moved toward nation building and inclusion into the European Union. In order to become part of the EU, a country is legally obligated to comply with and implement certain legal acts. Tobacco control legislation at the EU level consists of legally binding directives and nonbinding resolutions and recommendations regarding tobacco control (6). Croatia is currently a candidate nation for inclusion in the EU after starting accession negotiations on October 4, 2005. The government, headed by Prime Minister Ivo Sander has made membership for Croatia in the EU its top priority. Croatia hopes to be admitted to the EU in 2010. As such, the Croatian regulatory framework has been enacted somewhat exogenously by the process of joining the EU. Efforts to reduce tobacco consumption are not straightforward in a new country with both an evolving economy and a change in the political system. The goal of this paper is to explore the pros and cons of tobacco taxation in the transitional economy of Croatia.

## DISCUSSION

### Smoking Prevalence in Croatia

Tobacco has been grown, consumed, and exported in Croatia for centuries. During the last 100 years, the habit of cigarette smoking was highly prevalent, socially acceptable and considered a sign of adulthood. A large cross sectional study by Turek and colleagues in 1997 noted that 34.1% of Croatia’s males and 26.6% of females between the ages of 18 and 65 were daily smokers

(7). For comparison, this corresponds to a rate of 24% for all adults who smoked in the US in 1997 (8). Selected data from a study by the European Commission of 2005 data shows that the smoking prevalence of Croatia is 36% which is higher than the EU25 countries average of 33% (9). A recent article by McDonald (2007) notes that about one-third of the adults in Croatia smoke, putting the country of 4.5 million people roughly on par with

the heaviest-smoking EU member states (10). McDonald further notes that Croatians reportedly smoke 2,086 cigarettes per head per year, compared to a European average of 1,673. With regard to the health consequences of smoking, it should be underscored that in 2002 an estimated 17% of all deaths in Croatia were caused by smoking and 80% of all cancers were lung cancer (11).

When discussing the health of a population, public health

**Table 1. Legislation on advertising and distribution of tobacco products and smoke-free environments**

Description	Ban	Partial restriction	Voluntary agreement	No restriction	No data available
<i>Direct advertising of tobacco products</i>					
National TV	x				
Cable TV	x				
National radio	x				
Local magazines, newspapers	x				
International magazines, newspapers				x	
Billboards, outdoor walls	x				
Points of sale, kiosks		x			
Cinemas	x				
<i>Indirect advertising of tobacco products</i>					
Product placement – TV and films	x				
Sponsored events with tobacco brand name	x				
Non-tobacco products with tobacco brand names	x				
Non-tobacco product brand name used for tobacco	x				
Direct mail giveaways	x				
Promotional discounts	x				
<i>Distribution of tobacco products through various outlets</i>					
Vending machines	x				
Self-service displays		x			
Mail order or electronic sales		x			
Sale of single or unpacked cigarettes	x				
Sale of duty-free tobacco products		x			
Free samples of cigarettes	x				
<i>Smoke-free areas</i>					
Health care facilities	x				
Education facilities	x				
Government facilities	x				
Restaurants		x			
Pubs and bars		x			
Indoor workplaces and offices	x				
Theatres and cinemas	x				
<i>Smoke-free public transport</i>					
Buses	x				
Taxis	x				
Trains		x			
Domestic air transport	x				
International air transport	x				
Domestic water transport		x			
International water transport		x			

officials often refer to the “burden of disease” in a population. The burden of disease in a population can be defined as the gap between current health status and an ideal situation in which every individual lives into old age, free of disease and disability. The gap can be caused by premature mortality, disability, and certain risk factors such as tobacco, high cholesterol or obesity that contribute to illness. One summary measure that combines the impact of illness, disability, and mortality on population health is the disability-adjusted life year (DALY). The World Health Organization published a report in 2005 highlighting health issues in Croatia (12). The top risk factor identified for men was tobacco with a total DALY’s of 23.6%.

Antismoking regulations can be classified into two main groups- price-or tax-based policies and non-price measures. The non-price policies encompass a whole range of policies including geographic restrictions, tobacco advertising bans, sales limitations, packaging mandates, and health warnings about tobacco consumption. Table 1 and 2 summarize the current legislation on tobacco products currently in place in Croatia. Pricing policies to reduce tobacco consumption are essentially tax based policies. This paper focuses primarily on the complexities of using tax based policies to reduce consumption in Croatia.

## Pricing Policies to Control Tobacco Consumption

The ability of governments to influence tobacco use via higher price depends on the price elasticity of demand. Relatively low price elasticity signifies a small demand and thus the inability of higher taxes to reduce cigarette consumption. One of the most effective means of reducing tobacco consumption is by taxation. With respect to young people, tax increases are the most effective intervention to persuade people to quit or not to start smoking (13). Young people and others with low income tend to be highly sensitive to price increases. Because price is an especially powerful determinant of smoking initiation in youth, it significantly moderates long-term trends in cigarette consumption. In the US, a 10% increase in the price of cigarettes can lead to a 4% reduction in the demand for cigarettes. This reduction is the result of people smoking fewer cigarettes or quitting altogether (14). Although there is no available data on the impact of pricing policies on cigarette consumption in Croatia, experience from neighboring Hungary found that regular tobacco tax increases resulted in decreased cigarette consumption and lower prevalence figures in some population groups (15). Raising taxes on tobacco products is considered a highly effective component of a comprehensive tobacco control strategy.

**Table 2.** Legislation on health warnings, ingredients/constituents, number of cigarettes per pack and minimum age for buying tobacco

Description	Required/ regulated	Not required/ regulated	No data available	Comments
Minimum age for buying tobacco products	x			18 years
Health warnings on tobacco products:	x			
placing of the message	x			
colour, contrast, font size	x			
area to cover		x		
content	x			
number of messages	x			
language	x			
Health warnings in tobacco advertisements				not applicable
Measurement of:				
product ingredients	x			
smoke constituents	x			
Content of:				
nicotine	x			
tar	x			
additives			x	
carbon monoxide			x	not applicable
PH			x	
Disclosure of ingredient or constituent information:				
to government		x		
on packages	x			not applicable
in advertisements				
Minimum number of cigarettes per pack	x			20

On average, from 2001 to 2005 the price of tobacco products rose by an annual rate of 6.8% above inflation in the EU countries. For the same period, the annual price variation in Croatia was 1.4% (16). Cigarette tax is composed of excise tax, ad valorem tax (levied as a percentage of price) and value added tax (transaction tax). According to data accessed on the Croatian Chamber of Economy web page (September 20, 2007), a pack of cigarettes (20 pieces) is taxed as follows:

- Group A 0,76 € popular cigarettes
- Group B 0,88 € standard cigarettes
- Group C 1,51 € extra cigarettes.

Croatia lags behind other European areas in its use of a taxing strategy to combat smoking. The reasons are multiple and complex. In general, governments often hesitate to act decisively when adopting tobacco tax increases for fear that the economy may be harmed through a loss of jobs and income from growing, manufacturing, exporting and selling tobacco. The direct or indirect pro-smoking lobbying efforts also mitigate efforts to raise cigarette taxes. This is the case in Croatia.

The major tobacco company in Croatia is Tvornica Duhana Rovinj (TDR). TDR enjoys a dominant position as a Croatian taxation regime has helped to create a monopoly at the expense of the other major players, BAT and Philip Morris. TDR produces mainly domestic brands and had made Marlboro under license until 2005. Its flagship brand Ronhill is the most recognized and best-selling cigarette in Croatia. The most popular foreign brand is Marlboro. TDR dominates the Croatian cigarette market and controls 75% of the local leaf tobacco production and exports 50% of it. If Croatia is to achieve full integration into the EU, it will have to accept free competition in the tobacco market. It is anticipated that BAT, Philip Morris and others will enter the Croatian market once harmonized EU legislation has been passed in the country.

Table 3 shows the price of a pack of cigarettes\* in Croatia for the most popular foreign and local brands (2008).

**Table 3. Prices per pack of cigarettes\* in Croatia for the most popular foreign and local brands in 2008**

Foreign brands price (€)		Local brands price (€)	
Marlboro	2,78 €	Ronhill	2,15 €
Lucky Strike	2,78 €	Kolumbo	1,30 €
Dunhil	3,05 €	Filter 160	2,08 €
		Walter Wolf	2,08 €

\*20 cigarettes per pack. Prices include taxes

By comparison, the price of a pack of Marlboro cigarettes in New York State is \$ 6.25 (4,34 €) and in France is \$ 7.33 (5,09 €). The price of a pack of Ronhill, probably the most popular domestic cigarette in Croatia is 2,15 € compared to a kilogram of apples 0,89 €, one loaf of white bread 0,76 €, 10 eggs 1,66 €, a ½ liter bottle of local beer 0,68 €, a concert ticket 5,76 €, a routine Veterinarian visit 6,95 €. Another common measure of purchasing power parity is the cost in minutes of labor of a pack of the most popular cigarette brand. Unfortunately, no data are available for Croatia for this parameter. These numbers show that cigarettes are relatively affordable, particularly given the availability of smuggled cigarettes which can be bought even more cheaply.

The effectiveness of tax policies is undermined the extent of smuggled or counterfeit tobacco products on the market. The problem is that smuggled cigarettes are cheaper because taxes and duties are not paid. In fact, tobacco companies assert that increased taxation does not necessarily lead to decreased consumption and increased revenues but to increased smuggling. Recent experience in Bulgaria suggests that tax hikes while leading to a decrease in sales of cigarettes has also led to an increase in black market cigarettes. In Croatia, cigarettes are widely available on the black market. One source estimates that up to 25% of the cigarette consumption comprises smuggled cigarettes (17). Budak and colleagues (2006) report that despite increased taxes on tobacco products in Croatia since 1997, the tobacco tax revenues remain relatively unchanged (18). It is postulated that this was most likely due to an increase in black market activity. Indeed, a carton of black market cigarettes (10 packs) can be readily purchased for 100 kuna (approx. 13,90 €) from sellers standing on the street corner at Kvaternikov Trg, a major Zagreb square. A pack of Walter Wolf cigarettes smuggled from Serbia can be purchased at another prominent market on Trg Petra Kresimira in Zagreb for 10 kuna (1,39 €) per pack. Smuggling in Croatia is a complex and multifactorial issue. Goods that are smuggled are most often those that tend to undergo transformation or like alcohol and tobacco, are consumed. This makes the tracking of smuggled goods more difficult. Cigarettes are high import tax items which make them especially appealing for smugglers and consumers alike. Cigarette smuggling in Croatia often involves both locally produced cigarettes and major international brands such as Marlboro. Tobacco companies seem to have little incentive to reduce smuggling as lower priced cigarettes contribute to consumption. The common scheme for smuggling locally produced cigarettes usually involves “export” to a neighboring country, followed by illegal transport back into the country of origin. Cigarette smuggling can prosper in a region where the borders are deliberately kept porous for political reasons such as the border between Croatia and the Croat-populated Herzegovina. Smuggling in Croatia is further facilitated by its ragged 5,835 kilometer long coast line on the Adriatic which is difficult to patrol. Smuggling of cigarettes in Croatia can also go in the other direction. For example, cigarettes produced in Croatian tobacco factories in Zagreb and the Adriatic sea town of Rovinj were smuggled to Capljina Herzegovina and from there were transported all over Herzegovina as nationally produced products (19). Due to high import taxes and duty rates, smuggling cigarettes can be a profitable activity. Statistics of cigarette smuggling are difficult to locate as the topic does not easily lend itself to being a topic of academic scrutiny. It has been estimated that the number of smuggled cigarettes in Croatia as a percentage of domestic sales is between 25% and 49.9% (20). There is no officially published estimates for the proportion of cigarettes smuggled. To combat illicit trade, legislation needs to include measures such as requirements for package markings or creation of a system for conclusively tracking products through the entire distribution chain. A specific intra-country task force and more stringent border control may be needed to address this problem.

Croatia is not alone in terms of its issues with cigarette smuggling. The United States also suffers from cigarette smuggling. Although reliable statistics are not available, a spokesman for the Federal Bureau of Alcohol, Firearms, Tobacco and Explosives notes that 8 years ago there were only 100 tobacco smuggling in-

vestigations in New York state, and now there are several hundred (21). Indeed, a survey conducted in 2006 by the New York State Department of Health found that nearly half of the smokers interviewed in New York City said they had bought illegal cigarettes within the last year (22). A small sample of convenience in Croatia seems to indicate that the percentage is higher in Croatia.

Tobacco growing has a long history in Croatia dating back to the 1570's. The country brings in large profits from the tobacco industry. The main domestic product is Virginia tobacco. In 2000, the market share by cigarette manufacturer was 99% by Croatian manufacturers (23). Tobacco constitutes an important sector of agriculture and industry which contributes heavily to the national budget. In agricultural exports, Croatia has become the largest exporter of tobacco in the region. As smoke-free policies motivate some smokers to give up smoking, there may be a loss of profit to the tobacco industry and, consequently, reductions in tobacco-related employment. Among EU members, Croatia is particularly vulnerable in this area with a relatively high unemployment rate of 14.7 % and an average nominal monthly wage of 5,018 kuna (698 €) (24).

Cigarette tax is a very important source of government revenue. TDR, one of the largest producers and exporters of cigarettes in Croatia claims that they contribute 5.5% of the total revenue of the state budget (25). The Economics of Tobacco for the Europe and Central Asia (ECA) region report confirm that cigarette tax revenue is 5% of the total Croatian government tax revenue (26). Public health officials seem to be at odds with the sector that places an emphasis on the contribution of the tobacco industry to tax revenues and values the livelihood of people who make their living from growing or selling tobacco. The majority of tobacco that is produced in Croatia is produced by small family farms (average size 4 ha) in Eastern Croatia (27) and 6,100 total hectares devoted to tobacco production (28). Family farms produce tobacco on a contract basis. About 15 % of total production comes from large producers. There are four tobacco processing firms in Croatia. Three are owned by the tobacco factory Rovinj (TDR). All of these producers contribute to the national employment rate in a country that is working hard to stimulate its economy. These factors contribute to the push/pull of health versus economy. Still, taxation remains a powerful tool, particularly in the young, to discourage smoking. Additional taxation with revenues earmarked specifically for public health efforts could be imposed.

## CONCLUSIONS

Overall, Croatia does not fare badly in terms of implementing antismoking policies compared to other countries in transition. On the positive side, more Croat smokers and ex-smokers were exposed to anti-smoking campaigns than smokers in other European countries (29). The issue of tobacco control in Croatia however, is not a simple one and requires a multi-pronged approach.

Croatia has accepted and embraced the modern concept of health promotion, which intends to improve the level of public health by tackling health determinants and not just preventing disease. A stronger effort aimed at the entire population is needed to encourage individuals to stop smoking. Ideally, action should include age- and gender-based promotional and educational programs. Treatment for smokers should be provided either at

reduced cost or free of charge. Training in smoking cessation should be part of the basic curriculum for all health professionals. Even brief and simple advice from health professionals can have a substantial increase in smoking cessation rates. A primary focus of all primary health care providers (nurses, physicians, dentists and pharmacists) should be efforts and education about smoking cessation.

The regulation about smoking in public places and the workplace should become more restrictive and there is the outstanding issue of effective enforcement of existing regulations. Current regulation should be enforced with very heavy penalties and litigation if necessary. Sanitation inspectors who oversee the implementation of the regulation should provide periodic automatic reports to the Minister of Health on what was found and the action taken. Specifically, smoking should be banned in all public places including restaurants, pubs, bars and public transportation. Further, social marketing efforts should stress non-smokers rights to enjoy a smoke free environment so that individuals will be less tolerant of public exposure to second hand smoke.

Additional efforts are needed with respect to the advertising of tobacco. It is suggested that legislation be enacted to ban advertising at point of sale, kiosks. Regarding promotion, sponsorship, and all forms of indirect advertising, the country would be wise to adopt a total ban on advertising.

It is well known that cigarettes are addictive. The Institute of Medicine, a unit of the National Academy of Sciences, has called for a gradual reduction of the nicotine content of all cigarettes to non-addictive levels. (30). While this is a worthy strategy and should be considered as an amendment to Croatian law, this would take years to eliminate addiction. A firmer strategy would be one that includes raising cigarette taxes, a complete ban of smoking in public places, enforcing the laws against selling tobacco to children, and offering free or inexpensive help to smokers trying to quit. Finally, an economic package that stimulates the economy and reduces the burden of unemployment will do much to close the gap between those who feel the need for tobacco revenues and those who place a higher value on individual human life.

The economic future of Croatia is optimistic given the many natural assets and talents of the country and its people. Placing a high value on and preserving the health of its citizens is consonant with a forward moving country in the 21st century. Although this is a challenge for a young emerging country with high unemployment and a state budget that includes a large contribution from tobacco tax revenue, the long term societal cost of smoking vastly outweighs the short term gains.

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